STATISTICS DENMARK

Documentation of statistics for Health Insurance Statistics 2022

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1 Introduction

These statistics focus on the consumption of health care services within the primary public health care sector . The statistics are based on annual extracts from LUNA, which is the IT system used by the regions to settle accounts for health services with the individual providers (e.g., physicians, dentists, etc.). The statistics have been compiled since 1986 but are comparable from 2006 onwards.

2 Statistical presentation

The statistics cover visits to general practitioners and healthcare providers under the national health insurance. The statistics include the number of contacts, the associated fees, and the number of recipients.

2.1 Data description

The statistics compile the number of recipients, contacts, and expenses for treatments covered by the national health insurance over the course of a year. These are assessed with regard to gender, age, residence, origin, education, socioeconomic status, income level, family type, and medical specialty/type of service.

2.2 Classification system

In connection with publications, the following classifications of Visits to physicians etc. are applied:

- Medical specialty/type of service, aggregate (code for type of physician, and breakdown of consultations with GP) with 21-grouping
- Medical specialty/type of service (more detailed breakdown by medical specialists etc.) with 47-grouping

The applied grouping of specialties/service types is based on the divisions in the fee schedules Furthermore, other classifications from other sets of statistics are applied:

- Socio-economic status (self-employed persons; assisting spouses; chief executives; high-level employees; mid-level employees; ground-level employees; other employees; unemployed persons; students; retired persons and persons receiving early retirement benefit; persons outside the labour force; not stated). Note that socio-economic status was revised in the Register-based Labour Force Statistics released in May 2015, where a prioritisation has resulted in more students and fewer children. In Visits to physicians etc. 2014, the statistics broken down by socio-economic grouping are recalculated for 2009-2013.

- Income level (1st quartile; 2nd quartile; 3rd quartile; 4th quartile). Note: new version of The Income Register in the spring of 2015. In Visits to physicians etc. 2014, the statistics broken down by socio-economic grouping are recalculated for 2011-2013.

- Family type (singles without children in the home; singles with children in the home; couples without children in the home; couples with children in the home)

- Ancestry (persons of Danish origin; immigrants; descendants)

- Geography (municipalities; provinces; regions)

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2.3 Sector coverage

Primary health care sector in Denmark.

2.4 Statistical concepts and definitions

Contact with health care providers under the national health insurance: Includes consultations, telephone and email communications, and home visits. However, other services, such as laboratory tests, as well as additional services provided in connection with a consultation, are not counted as a contact. This can mean that even if a larger number of individual services are billed during a consultation, it will still be recorded as one contact

Person with contact to health care providers under the national health insurance: A person who has had at least one contact with a healthcare provider under the national health insurance.

Public health insurance expenses: Expenses for providers covered by the national health insurance.

2.5 Statistical unit

- Number of persons with contact/visits to physicians
- Number of contacts/visits to physicians
- Public expenditures in DKK 1,000
- Contacts per person in the population
- Share of the population with contact

2.6 Statistical population

Contacts (visits to physicians etc. - including telephone and e-communication) in the primary public health service.

2.7 Reference area

Denmark.

2.8 Time coverage

The statistics cover the time period from 2006 and forward.

2.9 Base period

Not relevant for these statistics.

2.10 Unit of measure

- Number (contacts, persons)
- DKK 1,000 (expenditures)
- Contacts per person
- Share with contact

2.11 Reference period

The reference time is the year in which the service has been settled.

2.12 Frequency of dissemination

Yearly.

2.13 Legal acts and other agreements

There is no EU regulation concerning the statistics on visits to physicians etc.

2.14 Cost and burden

There is no response burden as the data are collected via the joint-municipal register for public health insurance.

2.15 Comment

Visits to Physicians.

3 Statistical processing

Data is received once a year from the Regions. It is assessed which services can be classified as contracts. Basic and practice cost fees are summed. For individuals with child identification, age and gender are imputed, and the person_id is set to unknown. Individuals with invalid CPR numbers are not included in the statistical tables. Corrections that cannot be associated with a registration in the respective year are deleted. Registrations where the variable SIKGRUP has the value 9 (Deceased) are deleted. Data is linked with background data from Statistics Denmark.

3.1 Source data

The primary source is LUNA. Additionally, there are supplementary sources regarding services from the tariff folders.

Internal sources:

- The register of population statistics (family type, ancestry)
- The register of income statistics (level of income) for the previous year
- Register-based Labour Force Statistics (socio-economic status) as of November the previous year.

3.2 Frequency of data collection

Yearly.

3.3 Data collection

Register.

3.4 Data validation

The data received are compared with data from the previous year, and any major fluctuations examined to reassure quality. For the purpose of statistical production data are analyzed thoroughly.

3.5 Data compilation

Services that are not specified as supplementary services in the tariff folders are categorized as contracts. The number of contracts is calculated as the sum of the variable 'antal ydelser'' for the services categorized as contracts. Starting from 2006, gender and age imputation has been performed for the smaller group of children registered with child marking, and the person_id is set to unknown. Basic data (SSSY) is generated from the above data, and basic data is created, where the number of contacts (SSKO) and gross fees (SSHO) are aggregated at the person and service level. In this data, contacts with general practitioners are further divided into: daytime consultations, evening consultations, daytime telephone consultations, evening telephone consultations, daytime visits, evening visits, e-communication (including with municipal nursing staff), other services, and prevention, etc.

Before the data is uploaded to the Statbank Denmark, further data processing takes place. Individuals with invalid CPR numbers, individuals with child marking, and corrections (negative values for the service) that cannot be associated with a registration in the respective fiscal year are deleted. This means that corrections (negative entries) that do not match any registrations on the variables person_id, 'date of treatment' (date of service), 'specialty' (type of service), and "ydeltid" (time of service) are excluded. The first registered gender and the first registered age are used for individuals who appear in the data with multiple CPR numbers. Registrations where the variable 'SIKGRUP' (Health Insurance Group) has the value 9 (Deceased) are deleted. Health insurance data is linked with other data on family relationships, origin, socio-economic status, and income.

3.6 Adjustment

From 2005, the register was cleansed of observations for which there are no reimbursements via the public health insurance (the gross fee equals 0). This applies primarily to physiotherapy and dental treatment. Accordingly, data is assessed for 2005 both by the old method of assessment by which data is not cleansed, and the new assessment method by which data is cleansed.

There is a very small number of records where the contacts are negative. In 2022, there are 146,020 negative records (equivalent to 0.15pct. of all records). This is due to billing-related corrections in the registry, meaning corrections that are not made by Danmarks Statistik. Starting from 2021, corrections that cannot be linked to a registration in the respective year will be deleted.

4 Relevance

The statistics are used by a wide range of users, including public institutions, researchers, private individuals, and journalists. These users utilize the statistics for various purposes, including public planning, research, and public debate.

4.1 User Needs

- Users: Municipalities, regions, ministries, organisations, private companies and private individuals.
- Fields of application: Public planning purposes, research and public debate.

4.2 User Satisfaction

There is regular contact with users, either by email or by phone. Based on feedback, it is assessed that the needs of users are largely met. However, there is also demand for, among other things, the reasons for the contacts and the expenses for the private household in connection with healthcare treatments.

4.3 Data completeness rate

Under preparation.

5 Accuracy and reliability

The registry has full coverage, and the data is of relatively high quality. Changes in agreements from year to year can make comparability over time challenging within relatively narrow areas. Danmarks Statistik manually categorizes services in the health insurance as contacts every year. This affects the calculation of the number of contacts and the number of individuals with contacts.

5.1 Overall accuracy

Since the information originates from the statutory administration, the accuracy is considered to be high.

In assessing whether a service should be included under contacts, there is an element of lack of accuracy.

Physiotherapy is often provided as group training, allowing each physiotherapist to train multiple individuals at once. The training for each individual is recorded as a contact. The same applies when a psychologist conducts group therapy.

The register also includes information about services given to persons without a valid civil registration number – typically foreigners. For these persons, it is not possible to break down on sex and age.

5.2 Sampling error

Not relevant for these statistics.

5.3 Non-sampling error

There may be measurement errors when assessing whether new services qualify as contacts or not, and if services appear in the registry that are not listed in the fee schedules.

Up to and including 1995, 0-15 year-old children did not have their own national health insurance card, but were registered under the accompanying adult's civil registration number and given a special mark to indicate that the service was provided to a child. However, this has not been done in all instances. For this reason, the statistics include an unknown number of men and presumably even more women who should have been registered as children. Another issue that contributes to the underestimated number of children is the fact that an adult who has visited the physician with several children or with the same child on multiple occasions during the year, only appears as one person (one child). From 1996 onwards, all persons – except for unnamed new-born babies – have their own national health insurance card with their own civil registration number under which they should be registered. In spite of this, a minor group of children are still reported under the civil registration number of the accompanying adult. It implies a further risk of double counting of these children, as they may first have been registered under the civil registration number of an adult and subsequently under their own civil registration number.

5.4 Quality management

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.

5.5 Quality assurance

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

5.6 Quality assessment

Statistics Denmark estimates that data from LUNA is of high quality. Changes in the collective agreement services from one year to the next may imply some uncertainty in the calculation of contacts.

5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the Revision Policy for Statistics Denmark. The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

5.8 Data revision practice

Only final figures are published. As an exception, Visits to physicians etc. 2014 has undergone revisions in socio-economic status from 2009 and income distribution from 2011 due to revision of the source.

In September 2022, the basic data (SSSY) was expanded with the variables registration time and treatment date, and the statistical tables for 2021 were reissued. This was due to minor changes in the statistical production: Individuals with invalid CPR numbers, individuals with child markings, and corrections (negative values for services) that cannot be associated with a registration in the respective fiscal year are deleted. The first registered gender and the first registered age are used for individuals appearing in the registry with multiple CPR numbers. Registrations where the variable 'SIKGRUP' (Health Insurance Group) has the value 9 (Deceased) are deleted.

6 Timeliness and punctuality

The statistics are published 5-6 months after the end of the year. The punctuality is high.

6.1 Timeliness and time lag - final results

Only final numbers are compiled. The statistics are published within 6 months after the end of the reference period. In some cases there have been delays which cause the statistics to be published later.

6.2 Punctuality

The statistics are usually published without delay in relation to the scheduled date.

7 Comparability

Sundhedsdatastyrelsen produces statistics on general practice, specialist practice, and other practices on esundhed.dk. Delimitations and definitions of contacts (or the use of services instead of contacts) can result in statistics that may not appear directly comparable. Typically, any - often minor - differences could be explained by methodology and delimitation. The overall picture is clear

7.1 Comparability - geographical

Direct comparison with international statistics is not immediately possible. For comparable international data, we recommend that you look at data from Eurostat and the OECD, which make comparable data collections and publish data (e.g. OECD´s publication Health at a Glance) that is comparable to a certain extent in this field. There are a number of organisational and institutional conditions that we must keep in mind when analysing any differences.

7.2 Comparability over time

Since an increasing number of service providers have joined the system through the years, you should exercise caution when comparing over time.

For the years 1984, 1985 and 1986, the register relies on a 10 per cent sample that contains services

for persons born on day 14, 15 or 16 of a month; from 1987 onwards the register includes all services and persons covered by the agreements between the regions and the organisations representing the various service providers. Originally, it was typically physicians who held agreements with the former counties, whereas, today, a number of new service providers, e.g. psychologists and physiotherapists, have entered into agreements and accordingly, are included in the statistics.

In particular the number of contacts statistics may present difficulties when you make comparisons over time. Several methods have been applied over time to specifically delimit the services to be considered as contacts. This has involved a certain measure of data breaks in the number of contacts between the years up to 2005 and from 2006 onwards. From 2006, a revision has been made in the calculation of contacts.

In 2021, groups of young people who can receive free psychological assistance if referred for anxiety or depression were expanded to include those aged 22-24.

In 2022, the statistical production was changed, including a modification where corrections that cannot be associated with a registration in the respective fiscal year are deleted.

From 2006, the register includes an imputed amount for the general practitioners' basic fee etc. The total amount is broken down on the individual receivers of services from general practitioners in proportion to the gross fee. For visits to dentists, the first visit (including checkup) is registered as contact, whereas subsequent visits in the course of the same dental treatment procedure are not registered as contacts.

Physiotherapy is often administered as team training, so that the individual physiotherapist can train several persons at a time. The training of each person is assessed as a contact. For riding physiotherapy, the calculation will be uncertain for the same reasons that apply to physiotherapy.

In 2009, a large decline was seen in the number of dental contacts. This decline is not real but is owing to two types of service regarding preventive treatment ('502920', '502930') which are no longer included as contacts at the recommendation of the Danish Dental Association. This does not give a true and fair view of the development in contacts with dentists from 2008 to 2009 of approximately 500,000.

In 2011, the figures indicate a major increase in contacts etc. with chiropodists, which is explained by a prolonged conflict that was resolved by a collective agreement in this field on 1 June 2011. (For a long period of time, it has not been possible to calculate the number of contacts with chiropodists for two reasons: First of all, the breakdown of services makes it difficult to determine whether it counts as contact or not and consequently difficult to calculate the number of contacts. Second, there was no collective agreement in this field from June 2005 to June 2011. During this time, the major part of the fee to chiropodists was settled without the involvement of the public health insurance system and for this reason it was not included in the statistics.)

In 2011, there is a large decline in General practitioner, prevention etc., which is due to the discontinuation of service code "0106 Aftalt forebyggelseskonsultation" (agreed preventive consultation) and the tightened requirements for using the new code "0120 Aftalt specifik forebyggende indsats" (agreed specific preventive measures).

For 2011, the number of contact to psychologists is underestimated on a scale of 20,000 (roughly estimated), because specific services not included in the tariff folder should have been included as contacts. This did not happen until 2012 onwards.

For 2012, a further number of service codes have been included for psychologists, codes that are not mentioned explicitly in the tariff folder. These service codes have not been included for previous years, which is why the development for psychologists from 2011 to 2012 is overrated.

Due to a pilot project on Bornholm in 2012, the number of contacts with general practitioners is underestimated by approximately 112,000 for that year. The tariff folder for 2012 includes Assistance from an interpreter, and this does not result in changes in the number of contacts. Upon careful consideration, it has been decided not to include the expenses for assistance from an interpreter for 2012.

In 2013, the number of dental contacts dropped by 22 per cent as this field was narrowed in 2013, so that in future reimbursement is only granted for cleaning of teeth, and reimbursement for checkup on diagnostic findings is discontinued.

For 2013, Statistics Denmark has been informed by CSC Scandihealth that they have found small inaccuracies (regarding October, November and December 2013) in the submitted data, because adjustments in Region Midtjylland (Central Denmark Region) have been assessed with incorrect operational signs.

In 2014, socio-economic groups (soc_stil to soc_status) were revised in the Register-based Labour Force Statistics, and the period 2009-2013 has been recalculated. This amounts to a break in the socio-economic grouping between 2008 and 2009.

In 2014, the income register was revised, and the period 2011-2013 has been recalculated, but it has not had any noteworthy impact on the breakdown by income quartiles.

In 2021 is characterized by a new data supplier on Consultations of physicians and discontinued from some of the contact types cf. the revised types of benefits catalog from 2019. The biggest change is that types of benefits Diagn. radiologi Kbh. is deleted and added here Diagnost. Radiologi.

7.3 Coherence - cross domain

Total health expenditure appears from the regional accounts, table REGR31 in Statbank Denmark. The total amount for the health insurance reimbursements appears from the regional accounts. The Danish Health Authority published statistics on the population's use of the public health insurance. Both of these assessments are exclusive of the background information that exists in the Health Insurance Register of Statistics Denmark.

7.4 Coherence - internal

Data are internally consistent.

8 Accessibility and clarity

Nyt fra Danmarks Statistik and Statbank Denmark

Annual publications (selected sections): Statistical Ten-Year Review.

8.1 Release calendar

The publication date appears in the release calendar. The date is confirmed in the weeks before.

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8.3 User access

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.

8.2 Release calendar access

The Release Calender can be accessed on our English website: Release Calender.

8.4 News release

Further information is available at: Health Insurance Statistics

8.5 Publications

The statistics are presented in Statistical Ten-Year Review and Denmark in Figures, which can be found in Statistics Denmark's web pages.

8.6 On-line database

The statistics are published in the StatBank under the subject in the following tables:

- SYGP1: Number of persons with contacts covered by public health insurance by region, type of benefits, age and sex
- SYGPS1: Recievers og public health insurance by region, type of benefits, age and sex
- SYGK1: Contacts covered by the public health insurance by region, type of benefits, age and sex
- SYGKS1: Contacts covered by the public health insurance by region, type of benefits, age and sex
- SYGU1: Public health insurance expenses by region, type of benefits, age and sex
- SYGUS1: Public health insurance expenses by region, type of benefits, age and sex
- SYGP2: Number of persons with contacts covered by public health insurance by region, type of benefits, age and sex
- SYGPS2: Recievers og public health insurance by region, type of benefits, age and sex
- SYGK2: Contacts covered by the public health insurance by region, type of benefits, age and sex
- SYGKS2: Contacts covered by the public health insurance by region, type of benefits, age and sex
- SYGU2: Public health insurance expenses by region, type of benefits, age and sex
- SYGUS2: Public health insurance expenses by region, type of benefits, age and sex
- SYGFAM: Population by key figures, type of benefits, family type, sex, age and time
- SYGHER: Population by key figures, type of benefits, ancestry, sex, age and time
- SYGIND: Population by key figures, type of benefits, income level, sex, age and time
- SYGSOC: Population by key figures, type of benefits, socioeconomic status, sex, age and time
- SYGSIK: Population by region, health insurance group and time
- LIGEHB6: Consultations with the general practitioner by region, sex, age, family type and time
- LIGEHI6: Gender equality indicator of consultation with the general practitioner by indicator, region, age, family type and time

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8.7 Micro-data access

External access to de-identified micro-data is only available via Statistics Denmark's Research Services.

8.8 Other

There are no separate restrictions in the access to data. The health insurance register with de-identified micro-data exists in PSD (Statistics Denmark internal database) and as module data (SD internal database), and data can be made available to employees in e.g. Statistics Denmark's Research Services and SD Consulting on application in this regard.

8.9 Confidentiality - policy

Publication from the register will be in accordance to the data privacy policy of Statistics Denmark: Data privacy policy.

8.10 Confidentiality - data treatment

The statistics are not published at a level detailed enough for individuals to be identified.

8.11 Documentation on methodology

The basis and contents of the statistics are described (in Danish) in "Statistiske Efterretninger, Sociale forhold, sundhed og retsvæsen". Statistical Information for 2012 is the last version of this. Furthermore, the content of the register of health insurance is documented (in Danish) in Statistics Denmark's documentation system (TIMES) including selected variables such as Højkvalitetsdokumentation (high quality documentation): Højkvalitetsdokumentation.

8.12 Quality documentation

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

9 Contact

In terms of administration, these statistics belong in the office Social and Health. Jonas Kirchheiner-Rasmussen is the head of statistics, tel. +45 39 17 34 93, e-mail: ras@dst.dk

9.1 Contact organisation

Statistics Denmark

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